

**ABSTRACT**

Methods in accordance with the present invention involve novel measurements of the disease status of hosts infected with the human immunodeficiency virus. In particular, the present invention relates to a measurements of the numbers in a sample volume of (a) productively HIV-infected cells and (b) cells capable of being infected by HIV, e.g., cells expressing CD4, CCR5, and/or CXCR4. These two values can be represented as a single ratio, e.g., number of productively infected cells/number of cells capable of being infected by HIV, and can be utilized as an indicator of disease status, such as disease progression, viral replication, etc.

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